

Application No.: 09/871,739

Docket No.: H6810.0025/P025

AMENDMENTS TO CLAIMS

1. (Currently Amended) A method of observing a specimen in a field of view of an electron microscope comprising the acts of:

setting the magnification of said electron microscope;

setting ~~conditions~~ at least one condition for moving said field of view;

setting a starting position for said field of view;

moving said field of view based upon said at least one condition;

illuminating said specimen with an electron beam having a first angle and forming a first transmission image of said specimen in said field of view;

adjusting said electron beam to a second angle and forming a second transmission image of said specimen in said field of view; and

calculating a degree of coincidence between said first and second transmission images;

determining whether an image of said field of view is suitable or not for an observation based on the calculated degree; and

moving the field of view to a next position when (1) the image of said field of view is determined to be not suitable or (2) the image of said field of view is determined to be suitable and the observation of said image is finished.

2. (Original) The method of claim 1 wherein said calculating is performed utilizing a phase only correlation.

3. (Currently Amended) The method of claim 1 wherein said calculating is performed utilizing ~~[[an]]~~ a phase-amplitude correlation.

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4. (Original) The method of claim 1 wherein said field of view is not observed when said degree of coincidence is equal to 100 or 0.

5. (Currently Amended) The method of claim 4 further comprising the act of comparing said at least one condition with at least one preset values value for said at least one condition when said degree of coincidence is equal to 100 or 0.

6. (Currently Amended) The method of claim 5 further comprising the act of adjusting said at least one condition to said at least one preset value when said at least one condition is not at said at least one preset value.

7. (Original) The method of claim 1 wherein said field of view is observed when said degree of coincidence is in between, but not including, 100 to 0.

8. (Original) The method of claim 7 wherein said field of view is observed when said degree of coincidence is in between, but not including, 5 to 0.

9. (Original) The method of claim 8 further comprising the act of determining whether a desired form pattern is present in said field of view.

10. (Original) The method of claim 7 wherein said field of view is observed when said degree of coincidence is in between, but not including, 100 to 5.

11. (Original) The method of claim 10 further comprising the act of performing automatic focus correction of said first and second transmission images.

12. (Original) The method of claim 11 further comprising the act of forming a line profile of said first and second transmission images.

13. (Original) The method of claim 12 further comprising the act of observing said field of view when said line profile has a contrast greater than about 1.4.

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14. (Currently Amended) A method of observing a specimen in a field of view of an electron microscope comprising the acts of:

setting the magnification of said electron microscope;

setting at least one condition for moving said field of view;

setting a starting position for said field of view;

moving said field of view based upon said at least one condition;

illuminating said specimen with an electron beam ~~in one direction~~ and forming a line profile transmission image of said specimen in said field of view; and

observing said field of view if a change in brightness in said line profile is found

determining whether the image of said field of view is suitable or not for an observation based on the line profile transmission image; and

moving the field of view to a next position when (1) the line profile transmission image has the same level over the image of said field of view or (2) the image of said field of view is determined to be suitable and the observation of said image of said field of view is finished.

15. (Currently Amended) The method of claim 14 further comprising the act of comparing said at least one condition with at least one preset values value for said at least one condition if there is no change in said line profile.

16. (Currently Amended) The method of claim 15 further comprising the act of adjusting said at least one condition to said at least one preset value when said at least one condition is not at said preset value.

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17. (Currently Amended) A method of observing a specimen in a field of view of an electron microscope comprising the acts of:

setting the magnification of said electron microscope;

setting at least one condition for moving said field of view;

setting a starting position for said field of view;

moving said field of view based upon said at least one condition;

illuminating said specimen with an electron beam and forming a transmission image of said specimen in said field of view;

selecting a pattern from said transmission image and matching said selected pattern with a preset pattern; and

~~observing said field of view if a match is found between said selected pattern and said preset pattern~~

determining the image of said field of view is suitable when a match is found between said selected pattern and said preset pattern; and

moving the field of view to a next position when (1) the match is not found between said selected pattern and said preset pattern or (2) the image of said field of view is determined to be suitable and the observation of the image of said field of view is finished.

18. (Original) The method of claim 17 further comprising the act of counting said match.

19. (Currently Amended) An electron microscope comprising:

a support for supporting a specimen;

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a deflector for deflecting an electron beam to said specimen to create a transmission image;

an image pickup device for obtaining said transmission image; and

a processor coupled to said image pickup device being programmed for observing a specimen in a field of view of [(an)] the electron microscope, said programming comprising the acts of:

setting the magnification of said electron microscope;

setting at least one condition ~~conditions~~ condition for moving said field of view;

setting a starting position for said field of view;

moving said field of view based upon said at least one condition;

illuminating said specimen with an electron beam having a first angle and forming a first transmission image of said specimen in said field of view;

adjusting said electron beam to a second angle and forming a second transmission image of said specimen in said field of view; and

calculating a degree of coincidence between said first and second transmission images;

determining whether the image of said field of view is suitable or not for an observation based on the calculated degree; and

moving the field of view to a next position when (1) the image of said field of view is determined to be not suitable or (2) the image of said field of view is determined to be suitable and the observation of said image of said field of view is finished.

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20. (Original) The device of claim 19 wherein said calculating is performed utilizing a phase only correlation.

21. (Currently Amended) The device of claim 19 wherein said calculating is performed utilizing ~~[[an]]~~ a phase-amplitude correlation.

22. (Original) The device of claim 19 wherein said field of view is not observed when said degree of coincidence is equal to 100 or 0.

23. (Currently Amended) The device of claim 22 further comprising the act of comparing said at least one condition with at least one preset ~~values~~ value for said at least one condition when said degree of coincidence is equal to 100 or 0.

24. (Currently Amended) The device of claim 23 further comprising the act of adjusting said at least one condition to said at least one preset value when said at least one condition is not at said at least one preset value.

25. (Original) The device of claim 19 wherein said field of view is observed when said degree of coincidence is in between, but not including, 100 to 0.

26. (Original) The device of claim 25 wherein said field of view is observed when said degree of coincidence is in between, but not including, 5 to 0.

27. (Original) The device of claim 26 further comprising the act of determining whether a desired form pattern is present in said field of view.

28. (Original) The device of claim 25 wherein said field of view is observed when said degree of coincidence is in between, but not including, 100 to 5.

29. (Original) The device of claim 28 further comprising the act of performing automatic focus correction of said first and second transmission images.

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30. (Original) The device of claim 29 further comprising the act of forming a line profile of said first and second transmission images.

31. (Original) The device of claim 30 further comprising the act of observing said field of view when said line profile has a contrast greater than about 1.4.

32. (Currently Amended) An electron microscope comprising:

a support for supporting a specimen;

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a deflector for deflecting an electron beam to said specimen to create a transmission image;

an image pickup device for obtaining said transmission image; and

a processor coupled to said image pickup device being programmed for observing a specimen in a field of view of ~~[(an)]~~ the electron microscope, said programming comprising the acts of:

setting the magnification of said electron microscope;

setting ~~at least one condition~~ condition for moving said field of view;

setting a starting position for said field of view;

moving said field of view based upon said at least one condition;

illuminating said specimen with an electron beam ~~in one direction~~ and forming a line profile transmission image of said specimen in said field of view; and

~~observing said field of view if a change in brightness in said line profile is found~~

determining whether the image of said field of view is suitable or not for an observation based on the line profile transmission image; and

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moving the field of view to a next position when (1) the line profile transmission image has the same level over the image of said field of view or (2) the image of said field of view is determined to be suitable and the observation of said image of said field of view is finished.

33. (Currently Amended) The device of claim 32 further comprising the act of comparing said at least one condition with at least one preset values value for said at least one condition if there is no change in said line profile transmission.

34. (Currently Amended) The device of claim 33 further comprising the act of adjusting said at least one condition to said at least one preset value when said at least one condition is not at said preset value.

35. (Currently Amended) An electron microscope comprising:

a support for supporting a specimen;

a deflector for deflecting an electron beam to said specimen to create a transmission image;

an image pickup device for obtaining said transmission image; and

a processor coupled to said image pickup device being programmed for observing a specimen in a field of view of ~~[[an]]~~ the electron microscope, said programming comprising the acts of:

setting the magnification of said electron microscope;

setting at least one ~~conditions~~ condition for moving said field of view;

setting a starting position for said field of view;

moving said field of view based upon said at least one condition;

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illuminating said specimen with an electron beam and forming a transmission image of said specimen in said field of view;

selecting a pattern from said transmission image and matching said selected pattern with a preset pattern; and

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~~observing said field of view if a match is found between said selected pattern and said preset pattern~~

determining the image of said field of view is suitable when a match is found between said selected pattern and said preset pattern; and

moving the field of view to a next position when (1) the match is not found between said selected pattern and said preset pattern or (2) the image of said field of view is determined to be suitable and an observation of said image of said field of view is finished.

36. (Original) The device of claim 35 further comprising the act of counting said match.

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